REMARKS:

Claims 1-14 are pending in the present application.

In the Office Action dated May 3, 2006, the Examiner continued to reject all pending claims of the present application pursuant to 35 U.S.C. § 103 as being obvious in view of some combination of the following prior art references: U.S. Patent No. 6,792,623 issued to Luppi; U.S. Patent No. 4,552,150 issued to Cowley et al.; U.S. Patent No. 5,283,914 issued to James; and French Patent No. 2,614,538 issued to Grizard et al.

First, claim 1 has been amended to remove the term "integral" in response to the Examiner's expressed concern that this term was vague or ambiguous. More importantly, claim 1, along with independent claims 8 and 14, have been amended to clarify that the inflatable neck cuff of the present invention fits under the wearer's chin, which "not only ensures proper sealing against the wearer's neck, but also prevents the hood 10 from rising up relative to the wearer's head due to the upward forces resulting from the introduction of air into the interior of the hood 10." See Specification at p. 5, lines 8-16.

Turning now to the cited prior art references, independent claims 1, 8, and 14 were rejected as being obvious in view of U.S. Patent No. 6,792,623 issued to Luppi and U.S. Patent No. 4,552,150 issued to Cowley et al.

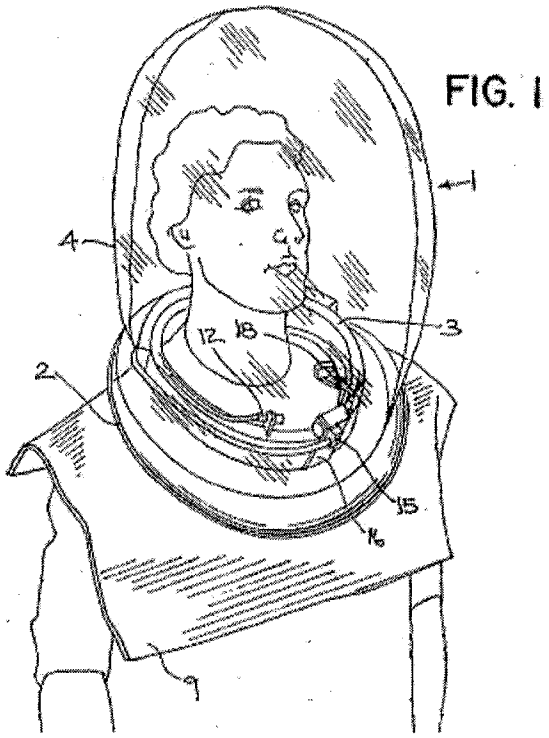
As described in response to a prior Office Action, Luppi describes a rigid helmet. This helmet is used in artificial respiration for patients with a medical condition that requires assisted breathing. Furthermore, this rigid helmet does not include an inflatable neck cuff, but rather an inflatable "bag" with a lower portion that is gathered around the neck of a patient. See column 3, lines 21-24; and Figures 6-7. This bag essentially fills "dead space" within the helmet, "with a

consequent better reactivity of the system which, in assisted ventilation, allows the ventilator to detect promptly the pressure drop at the beginning of inspiration...." See column 3, lines 25-28. Even if this bag could properly be characterized as an inflatable neck cuff, Luppi does not include any teaching or suggestion regarding the inflation of its bag to a size sufficient to exert a sealing pressure against the neck of the wearer. Rather, Luppi describes the use of a separate deformable sealing collar 11 that rests on the shoulders of the wearer. Similarly, Luppi does not include any teaching or suggestion regarding the use of an inflatable neck cuff to prevent the helmet from rising relative to the head of the wearer. Indeed, Luppi concedes that its bag does not serve this purpose by describing the use of straps "to produce a firm coupling of the helmet to the patent, avoiding the unpleasant phenomenon of lifting during use." See column 1, lines 14-16. For these reasons, Applicant respectfully disagrees with the Examiner's contention that Luppi teaches a neck cuff that "exert[s] a sealing pressure against the neck of the wearer and prevents the hood from rising up relative to the head of the wearer." See Office Action dated May 3, 2006 at p. 3, ¶ 1.

Furthermore, Applicant points that although Luppi may describe an air delivery path, it is not a path that directs air over the head of the wearer to the interior of the lens and downwardly across the face of the wearer. Quite distinctly, the "bag" used by Luppi to fill "dead space" within the helmet defines a limited breathing zone. Air flows from an inlet port 8 on one side the helmet to an outlet port 9 on the other side of the helmet in front of the face of the wearer in this breathing zone.

In any event, recognizing that Luppi fails to disclose all of the limitations of the claimed invention, the Examiner cited Cowley as supplying the missing limitations of the broadest claims

of the present application. Cowley describes an emergency escape device that includes a flexible hood attached to an inflatable collar. The wearer can actuate a supply of pressurized oxygen to simultaneously inflate the hood and collar. To ensure proper positioning on the wearer, the "reservoir 3 is concentrically positioned with collar 2 and is located on top of collar 2 so that when collar 2 is inflated the weight of reservoir 3 seals collar 2 around the user's neck." See column 3, lines 64-67. More precisely, the "[r]eservoir 3 is saddle-shaped to substantially rest on and conform to the shape of a user's thorax, shoulders and nape of the neck." See column 3, line 68 – column 4, line 2. In other words, and as illustrated in Figure 1 (reproduced below), there is no sealing pressure against the neck. Rather, the collar rests primarily on the shoulders of the wearer.



Finally, with respect to many of the dependent claims of the present application, the Examiner cited U.S. Patent No. 5,283,914 issued to James as disclosing "that it is known to include multiple overhead channels, which are directed to the lens of the respirator hood." See Office Action dated May 3, 2006 at p. 3, ¶ 5. James describes a rigid protective helmet for use in the mining or quarrying industries, with a construction and application quite different from that of a respirator hood. See column 1, lines 42-45. Furthermore, James does not teach or suggest the inflation of a neck cuff a size sufficient to exert a sealing pressure against the neck of the wearer, nor is there any teaching or suggestion regarding the use of an inflatable neck cuff to prevent the helmet from rising relative to the head of the wearer.

Turning now to the claims of the present application, claims 1, 6, 8, 12, and 14 were rejected as being obvious over U.S. Patent No. 6,792,623 issued to Luppi in view of U.S. Patent No. 4,552,150 issued to Cowley et al. Of course, for such a rejection to stand, the cited prior art references "must teach or suggest all of the claims limitations." M.P.E.P. § 706.02(j) (emphasis added). As mentioned above, independent claims 1, 8, and 14 have been amended to clarify that the inflatable neck cuff of the present invention fits under the wearer's chin, which "not only ensures proper sealing against the wearer's neck, but also prevents the hood 10 from rising up relative to the wearer's head due to the upward forces resulting from the introduction of air into the interior of the hood 10." See Specification at p. 5, lines 8-16. Neither Luppi nor Cowley teaches the incorporation of such an inflatable neck cuff into a flexible respirator hood.

With respect to Luppi, as described above, even if the inflatable "bag" that fills "dead space" within the helmet could properly be characterized as an inflatable neck cuff, Luppi does not include any teaching or suggestion regarding the inflation of its bag to a size sufficient to

exert a sealing pressure against the neck of the wearer. Rather, Luppi describes the use of a separate deformable sealing collar 11 that rests on the shoulders of the wearer. Similarly, Luppi does not include any teaching or suggestion regarding the use of an inflatable neck cuff to prevent the helmet from rising relative to the head of the wearer. Indeed, Luppi concedes that its bag does not serve this purpose by describing the use of straps prevent "lifting" of the helmet.

With respect to Cowley, there is no sealing pressure against the neck. Rather, the collar rests primarily on the shoulders of the wearer. In other words, Cowley relies on the weight of the reservoir and other components to provide a downward pressure against the body and shoulders of the wearer to form a seal, as contrasted to the radial forces that produce a sealing pressure against the sides of the neck and under the chin in the respirator hood of the present invention.

Accordingly, Applicant respectfully submits that the rejections of independent claims 1, 8, and 14 as being obvious in view of the Luppi and Cowley references are improper and should be withdrawn.[1]

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[1] Because the combination of the cited references does not teach all limitations of the claimed invention, for sake of brevity, Applicant does not address in detail the issue of whether Examiner's combination of these references was proper. When combining prior art references, the Court of Appeals for the Federal Circuit has repeatedly warned that a claimed invention can "not be obvious without a demonstration of the existence of a motivation to combine those references at the time of the invention." National Steel Car Ltd. v. Canadian Pacific Railway Ltd., 69 USPQ2d 1641, 1654-55 (Fed. Cir. 2004), citing Ecolochem, Inc. v. S. Cal. Edison Co., 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000). See also In re Rouffet, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998); In re Oetiker, 24 USPQ2d 1443, 1446 (Fed. Cir. 1992); Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678 79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); In re Geiger, 815 F.2d 686, 687, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987); and Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1147, 227 USPQ 543, 551 (Fed. Cir. 1985). In this case, Luppi describes a helmet for artificial respiration for use in a hospital or similar stetting, and thus is not concerned about preventing the inhalation of noxious smoke or gasses. Therefore, what would be the motivation for Luppi seek out an inflatable sealing collar from an emergency escape device for incorporation into a helmet for artificial respiration? No such motivation exists because there is no apparent disadvantage to the construction described by Luppi, "and therefore

Furthermore, claims 8 and 14 include the additional limitation that the hood has "one or more overhead channels which define an air delivery path from the air source over the head of the wearer to the interior of the lens and downwardly across the face of the wearer." As mentioned above, although Luppi may describe an air delivery path, it is not a path that directs air over the head of the wearer to the interior of the lens and downwardly across the face of the wearer. Quite distinctly, Luppi teaches the use of a "bag" to fill "dead space" within the helmet, and thus, defines a limited breathing zone. Air flows from an inlet port 8 on one side the helmet to an outlet port 9 on the other side of the helmet in front of the face of the wearer in this breathing zone. Cowley does not provide this missing limitation as air is introduced into the collar directly in front of the face of the wearer. Accordingly, the rejection of claims 8 and 14 should also be withdrawn, because even if properly combined, Luppi and Cowley fail to teach this particular limitation of the claimed invention.

Applicant further notes that the Examiner also rejected claim 2, which has similar limitations to claims 8 and 14, but based not only on the teachings of Luppi and Cowley, but also the teachings of U.S. Patent No. 5,283,914 issued to James. As mentioned above, the Examiner cited James as disclosing "that it is known to include multiple overhead channels, which are directed to the lens of the respirator hood." See Office Action dated May 3, 2006 at p. 3, ¶ 5. However, James describes a rigid protective helmet for use in the mining or quarrying industries, with a construction and application quite different from that of a respirator hood. Of course, and

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the motivation to combine would not stem from the 'nature of the problem' facing one of ordinary skill in the art, because no 'problem' was perceived...." Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 53 USPQ2d 1580, 1587 (Fed. Cir. 2000), cert. denied, 530 U.S. 1238 (2000).

as mentioned in footnote 1, it is well-settled that a claimed invention can "not be obvious without a demonstration of the existence of a motivation to combine those references at the time of the invention." National Steel Car Ltd., 69 USPQ2d at 1654-55. In this case, there is no such motivation. Again, Luppi teaches the use of a "bag" to fill "dead space" within the helmet, and thus, defines a limited breathing zone. Air flows from an inlet port 8 on one side the helmet to an outlet port 9 on the other side of the helmet in front of the face of the wearer in this breathing zone. In other words, the breathing zone is already defined and established, so why would one of ordinary skill in the art be motivated to propose an alternate technique for directing air to the breathing zone, especially one that would needlessly re-direct air flow to the back and then over the head of the wearer? In trying to articulate a motivation for combining the references, the Examiner comments that it would be desirable "for the purposes of providing means for introducing a filtered air supply between the wearer's face and the lens of a visor...." See Office Action dated May 3, 2006 at pp. 4-5, ¶ 5. However, this is already accomplished by Luppi. As such, there simply is no motivation for one of ordinary skill in the art to propose an alternate technique for directing air to the breathing zone.

In view of the arguments presented above, Applicant respectfully submits that the rejections of independent claims 1, 8, and 14 are improper and should be withdrawn. Furthermore, claims 2-7 and 9-13 depend from claims 1 and 8 respectively and are also now believed to be in condition for allowance in view of the arguments presented above. Applicant therefore respectfully requests allowance of the claims now pending in the present application. If after reviewing this response there are continuing concerns, the undersigned counsel would welcome the opportunity to speak with the Examiner and/or the Supervisory Examiner to discuss

possible resolutions to any remaining issues and/or to clarify issues for appeal.

Respectfully submitted,

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